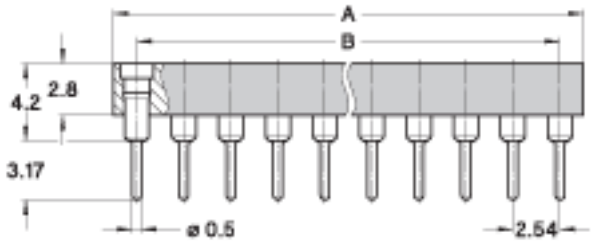
preci-dip

PGA / BGA / PLCC SOCKETS

SERIES 510

510-PP-NNN-XX-XXX101
PGA
Solder tail

Pin grid array sockets, standard solder version.



TECHNICAL SPECS.:

Insulator	Black glass filled polyester PCT-GF30-FR
Flammability	UL 94V-O
Sleeve	Brass CuZn36Pb3 (C36000)
Contact	Clip (6 finger): Beryllium copper (C17200)
Accepted pin Ø	0.40 to 0.56 mm
Insertion force	0.7 N typ.
Withdrawal force	0.4 N typ. (polished steel gauge Ø 0.46 mm)
Mechanical life	Min. 100 cycles
Rated current	1 A
Contact resistance	Max. 10 m
Dielectric strength	Min. 1000 V RMS

ORDERING INFORMATION:

PP Plating code	Sleeve	Clip
87	Tin	Gold flash
83	Tin	Gold 0.75 µm

Replace NNN with the number of poles and XX-XXX with body size and layout numbers as indicated here.For example a 17x17 pin configuration with window and 168contacts as shown here becomes 510-83-168-17-101101.Options: please consult for availability.- PGA sockets with optional standoffs.- PGA sockets with solder tails, length 4.2 mm.- PGA sockets with low profile contacts and solder tails of 2.8 mm length.

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TECHNICAL ASSISTANCE

GENERAL SPECIFICATIONS:

The values listed below are general specs applying for PRECI-DIP PGA, BGA and PLCC sockets. Please see individual catalog page for additional and product specific technical data.

Operating temperature range	-55 ... +125 °C
Climatic category (IEC)	55/125/21
Operating humidity range	annual mean 75 %
Max working voltage	100 VRMS/150 VDC (2.54 mm grid)

PRECI-DIP sockets are recognized by Underwriters Laboratories Inc. and listed under "Connectors for Use in Data, Signal, Control and Power Applications", File Nr. E174442

MECHANICAL CHARACTERISTICS:

Clip retention	Min. 40 N (no displacement under axial force applied)
Contact (sleeve / clip) retention	Min. 3.3 N acc. to MIL-DTL-83734, pt 4.6.4.2

ELECTRICAL CHARACTERISTICS:

Insulation resistance between any two adjacent contacts	Min. 10'000 M at 500 V AC
Capacitance between any two adjacent contacts	Max. 1 pF (PLCC max. 2 pF)
Self inductance per contact	Max. 2 nH

ENVIRONMENTAL CHARACTERISTICS:

The sockets withstand the following environmental tests without mechanical and electrical defects:

- Dry heat steady state IEC 60512-11-9.11i / 60068-2-2.Bb: 125 °C, 16h
- Damp heat cyclic IEC 60512-11-12.11m / 60068-2-30.Db: 25/55 °C, 90 – 100 %rH, 1 cycle of 24 h
- Cold steady state IEC 60512-11-10.11j / 60068-2-1.A: -55 °C, 2 h
- Thermal shock IEC 60512-11-4.11d / 60068-2-14.Na: -55/125 °C, 5 cycles 30 min
- Sinusoidal vibrations IEC 60512-6-4.6d / 60068-2-6.Fc: 10 to 500 Hz, 10 g, 1 octave/min, 10 cycles for each axis
- Shock IEC 60512-6-3.6c / 60068-2-27.Ea: 50 g, 11 ms, 3 shocks in three axis

During the above two tests no contact interruption >50 ns does appear.

- Solderability J-STD-002A, Test A, 245°C, 5 s solder alloy SnAg3.8Cu0.7
- Resistance to soldering heat J-STD-0020C, 260°C, 20 s
- Moisture sensitivity J-STD-020C level 1
- Resistance to corrosion :
  1) Salt spray test IEC 60068-2-11.Ka: 48 h
  2) Sulfur dioxide (SO2) test IEC 60068-2-42 Kc: 96 h at 25 ppm SO2, 25 °C, 75 %rH
  3) Hydrogen sulfide (H2S) test IEC 60068-2-43 Kd: 96 h at 12 ppm H2S, 25 °C, 75 %rH

SOLDERLESS COMPLIANT PRESS-FIT CHARACTERISTICS:

PRESS-FIT CHARACTERISTICS MEASURED ACC. TO IEC 60352-5

- Press-in force: 90 N max. (at min. hole dia.) / 65 N typ.
- Push-out force: 30 N min. (at max. hole dia.) / 50 N typ.
- Push-out 3rd cycle: 20 N min. (at max. hole dia.)

PCB HOLE DIMENSIONS

- 2.54 mm grid: Finished hole Ø: 1 + 0.09/-0.06 mm | Drilled hole Ø: 1.15 ± 0.02 mm

- Interstitial grid: Finished hole Ø: 0.7 + 0.09/-0.06 mm | Drilled hole Ø: 0.8 ± 0.02 mm

PCB HOLE PLATING

- PCB surface finish: Hole plating
- Tin: 5-15 µm tin over min. 25 µm copper
- Copper: min. 25 µm copper
- Gold over nickel: 0.05-0.2 µm gold over 2.5-5 µm nickel over min. 25 µm copper

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Preci-dip:

510-83-069-11-061101 510-83-132-13-041101 510-83-145-15-081101 510-83-132-14-071101 510-83-181-15-051101 510-83-064-10-001101 510-83-064-08-000101 510-83-056-09-041101 510-83-052-09-041101 510-83-068-11-001101 510-83-081-09-000101 510-83-044-12-071101 510-83-068-09-001101 510-83-066-11-002101 510-83-065-10-052101 510-83-065-10-051101 510-83-064-10-051101 510-83-072-11-041101 510-83-072-11-001101 510-83-069-11-001101 510-83-068-11-062101 510-83-068-11-061101 510-83-044-08-031101 510-83-012-05-001101 510-83-049-07-000101 510-83-068-10-001101 510-83-075-11-001101 510-83-073-11-061101 510-83-072-11-061101 510-83-037-10-061101 510-83-036-06-000101 510-83-032-09-041101 510-83-028-06-001101 510-83-025-05-000101 510-83-020-05-001101 510-87-299-20-091101 510-87-299-20-001101 510-87-289-17-000101 510-87-225-15-000101 510-83-081-12-071101 510-83-040-11-061101 510-87-279-19-081101 510-87-441-21-000101 510-87-361-19-000101 510-87-324-18-000101 510-87-309-21-001101 510-87-300-21-001101 510-87-233-18-071101 510-87-232-17-061101 510-87-225-18-091101 510-87-225-18-019101 510-87-225-17-061101 510-83-076-11-041101 510-87-240-17-061101 510-87-281-19-081101 510-87-238-19-101101 510-87-237-17-061101 510-87-236-17-062101 510-87-236-17-061101 510-87-257-19-081101 510-87-256-16-000101 510-87-243-19-081101 510-87-241-19-101101 510-87-241-18-072101 510-87-280-19-081101 510-87-224-18-091101 510-87-240-16-001101 510-87-273-21-121101 510-87-262-20-091101 510-87-261-18-071101 510-87-257-20-111101 510-83-180-14-031101 510-83-179-18-113101 510-83-179-18-001101 510-83-179-15-041101 510-83-181-15-001101 510-83-181-14-031101 510-83-201-15-041101 510-83-180-17-081101 510-83-180-15-041101 510-83-180-15-002101 510-83-180-15-001101 510-83-184-17-081101 510-83-184-15-001101 510-83-182-18-091101 510-83-181-17-082101 510-83-176-16-001101 510-83-169-17-101101 510-83-180-18-111101 510-83-156-15-062101 510-83-192-17-081101 510-83-192-16-001101 510-83-191-18-091101 510-83-160-15-061101 510-83-160-14-001101 510-83-160-13-001101 510-83-159-16-071101 510-83-156-16-091101 510-83-169-13-000101 510-83-177-15-061101